

What is claimed is:

- 1 1. A system for interleaving data in a wireless transmitter comprising:
2 a memory buffer; and
3 means, coupled to said memory buffer, for sending downstream every C^{th} bit of
4 an input data stream and for writing the remaining bits of said input data stream to said
5 memory buffer according to a first interleaving pattern.
- 1 2. The system of claim 1, wherein said every C^{th} bit is sent downstream without
2 being stored in said memory buffer.
- 1 3. The system of claim 1, wherein C comprises the number of columns in said
2 memory buffer.
- 1 4. The system of claim 1, wherein said means further comprises means for reading
2 said remaining bits from said memory buffer, forming an output data stream.
- 1 5. A system for interleaving data in a wireless transmitter comprising:
2 a memory buffer;
3 means for sending downstream every C^{th} bit of an input data stream;
4 means for writing the remaining bits of said input data stream to said memory
5 buffer; and
6 means for reading bits from said memory buffer according to a first interleaving
7 pattern.
- 1 6. A transmitter that transmits data via a wireless link, said transmitter comprising:
2 a medium access control layer;
3 a coding/multiplexing unit including:
4 a memory buffer, and
5 means, coupled to said memory buffer, for sending downstream every C^{th}
6 bit of an input data stream from said medium access control layer and for writing the
7 remaining bits of said input data stream to said memory buffer according to a first
8 interleaving pattern; and
9 a modulator coupled between the wireless link and said coding/multiplexing
10 unit.

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1 7. A system for interleaving data in a wireless transmitter comprising:
2 a memory buffer; and
3 a read/write unit, coupled to said memory buffer, wherein said read/write unit is
4 configured to send downstream every C^{th} bit of an input data stream and to write the
5 remaining bits of said input data stream to said memory buffer according to a first
6 interleaving pattern.

1 8. A system for interleaving data in a wireless transmitter comprising:
2 a memory buffer; and
3 means for sending downstream a first radio frame from an input code block, for
4 storing one or more additional radio frames from said input code block in said memory
5 buffer and discarding any remaining radio frames from said input code block, for
6 sending said additional frames downstream from said memory buffer, and for causing
7 said input code block to be re-calculated.

1 9. A method for interleaving data in a wireless transmitter comprising:
2 sending downstream every C^{th} bit of an input data stream; and
3 writing the remaining bits of said input data stream to a memory buffer
4 according to a first interleaving pattern.

1 10. The method of claim 9, wherein said every C^{th} bit is sent downstream without
2 being stored in said memory buffer.

1 11. The method of claim 9, wherein C comprises the number of columns in said
2 memory buffer.

1 12. The method of claim 9, further comprising reading said remaining bits from said
2 memory buffer to form an output data stream.

1 13. A method for interleaving data in a wireless transmitter comprising:
2 sending downstream every C^{th} bit of an input data stream;
3 writing the remaining bits of said input data stream to a memory buffer; and
4 reading bits from said memory buffer according to a first interleaving pattern.

1 14. A method for interleaving data in a wireless transmitter comprising:
2 (a) sending downstream a first radio frame from an input code block;

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- 3 (b) storing one or more additional radio frames from said input code block in
- 4 a memory buffer and discarding any remaining radio frames from said input code block;
- 5 (c) reading said additional radio frames from said memory buffer and
- 6 sending said additional frames downstream; and
- 7 (d) recalculating said input code block and repeating operations (a) through
- 8 (d) until said remaining radio frames have been sent downstream.

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